Amendments to the Specification:

Please replace the first full two paragraphs on page 2 with the following amended paragraphs:

Yet another object of the present invention is to provide a rotary control spool that utilizes an irregularly shaped notch that tapers inwardly to a point that increases the spool porting area in order to provide an aggressive response.

Another object of the present invention is to use the combination of the metered drain port with the irregularly shaped notch that tapers inwardly to a point that increases flow area in order to provide a rotary control spool that allows for an aggressive response and yet provides a smooth operation.

Please replace the first paragraph of the Background of the Invention with the following amended paragraph:

BRIEF SUMMARY OF THE INVENTION

The present invention is a high gain rotary control spool for an axial piston servo pump control and a method of creating feedback control using the same. The control spool is in a closed hydrostatic circuit and is fluidly connected to a servo controlled axial piston pump. The control spool has a drain orifice defined by a variable irregularly shaped metering porting notch that tapers inwardly to a point opened to the servo piston drain. By metering the drain and by having an irregularly shaped porting notch that tapers inwardly to a point that increases the flow area of the spool, the spool is able to provide an aggressive response and smooth operation. The method

of creating the feedback control with this unit involves displacing fluid within the servo control circuit, rotating the control spool to create an error signal, removing that the error signal with a control sleeve, and simultaneously metering the servo piston drain with the irregularly shaped metering porting notch that tapers inwardly to a point.

Please replace the first full paragraph on page 4 with the following amended paragraph:

Fig. 2 shows the rotary control spool valve 18 of the present invention. The valve 18 has a spool 22 that is an elongated cylinder rod that is specifically designed to fit within the elongated sleeve 24. As seen in Fig. 3, control spool 22 is designed to have a plurality of notches. The spool 18 has a first notch 26 that acts as an inlet servo fill notch that has a rectangular cross sectional area. The spool 18 also has a second notch 28 that functions as a servo drain and has an irregular cross sectional area that tapers inwardly to a point. Instead of having a rectangular cross section, the second notch servo drain 28 tapers inwardly to a point 30. This is unlike prior art cross sections that commonly use a rectangular shaped cross sections for the servo drain 28. Therefore, servo drain 28 is irregularly shaped to allow for a greater flow area. The sleeve 24 has a servo pressure inlet 32 and a servo drain outlet 34 that are associated with the first and second notches 26, 28 respectfully.

Please replace the first two full paragraphs on page 5 with the following amended paragraph:

It should be appreciated that the disclosed innovation relates to applying a control spool 22 that normally has its inlet and drain notches 26 and 28 open to the servo piston cavities creating a normally pressurized servo while metering the servo drain 28. By metering the servo drain 28 the control 18 makes management of the flow area relationships simpler and creates a smoother operating control. Preferably the improved spool also exhibits a restricting flow area of about 0.55 mm^2 compared to a metered spool that exhibits a flow area of only about 0.23 mm^2 at the same threshold. This difference in flow area will be directly related to the response-time of the unit allowing the improved spool to respond between two and three times faster than the metered spool. By using an irregular shaped servo drain notch 28 that tapers inwardly to a point as a metering notch allows for nonlinear response of control flow and subsequently servo pressure response. Thus, by combining the metered drain with the implementation of the irregular servo drain notch 28 that tapers inwardly to a point, the control 18 can create an aggressive response control while maintaining smooth control of the unit.

The improved control response is obviated in Figs. 5, 5A, 6, 6A, 7, and 7A that show graphically how using the metered drain and irregular shaped spool notch that tapers inwardy to a point compares to the standard spool and a metered spool.